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# Conserving South Carolina's At-Risk Species:

## *Species facing threats to their survival*

### Little brown bat

(*Myotis lucifugus*)



Little brown bat / Photo credit: USFWS

### Description

The little brown bat is a small to medium sized bat weighing 0.2 to 0.5 ounces and has a wingspan of 9 to 11 inches. The fur of the little brown bat is dark brown to cinnamon-buff with long glossy tips on the back and pale gray to buffy on the underside. The ears and membranes of the wing and tail are dark brown to black. A similar species, the northern long-eared bat (*Myotis septentrionalis*), has longer ears than the little brown bat and does not have long hairs on the feet. Female little brown bats are slightly larger than males, especially during the winter.

### Range

Little brown bats are widely distributed from central Alaska and southern Canada into the southeastern and southwestern United States. The southern limit of the species is in northern portions of South Carolina, down into Georgia, Alabama, and Mississippi. In South Carolina during the summer, little brown bats are found primarily in the Blue Ridge mountains, though there have also been a few confirmed reports in the Piedmont, Sandhills and lower Coastal Plain regions. It is un-

known where most of South Carolina's summer populations overwinter.

### Habitat

Little brown bats are habitat generalists, using most cover types available to them in a variety of ecosystems. Much of their foraging activity is associated with aquatic habitats so lakes and streams seem to play a significant factor in habitat use. However, not much is known about specific habitat use and home range in South Carolina.

### Status

The little brown bat is ranked by NatureServe as Globally Vulnerable—G3. In South Carolina, the little brown bat is considered rare to locally common in scattered colonies, and is listed as a Highest Priority species in the South Carolina 2015 State Wildlife Action Plan. The U.S. Fish and Wildlife Service (Service) is currently conducting a discretionary review of the species.

### Threats

Primary threats to this species are from white-nose syndrome (WNS) which is estimated to have killed at least one million little brown bats from 2006 to 2010. The core region where much of the global population of little brown bats occur is now infected with WNS. Population declines have also been attributed to pesticides, the loss of roost sites in snags due to deforestation, control measures in nursery colonies, collecting bats for experimentation, and disturbance of individuals during hibernation. Mass dieoffs at hibernacula not related to WNS have been associated with vandalism and natural disasters such as floods. Wind energy is another potential threat to little brown bats. Global climate change is a potential threat as it may make southern hibernation sites unsuitable.

### Management/Protection Needs

State law protects all bat species in South Carolina so extermination is not an acceptable form of bat control. The South Carolina Department of Natural Resources' Bat Conservation Plan should be consulted for alternatives. Habitat protection and management recommendations include working to prevent or reduce disturbance to natural and artificial roost structures, as well as to maternity colonies and hibernacula. Where and when possible, create or maintain patches of structurally diverse forest, providing a variety of suitable roosting and maternity sites. Forestry practices should incorporate buffers around known roosts, foraging areas, and migration corridors via landowner incentive programs, conservation easements, lease agreements, or purchases. Minimize large-scale pesticide use, especially around known foraging areas and maternity roosts. Continue to survey and monitor for the species. Further research is also needed to identify the best placement of wind turbines so as to minimize impacts to bats. Continue with education and outreach efforts on the species.

### References

NatureServe. 2018. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://explorer.natureserve.org>.

South Carolina Department of Natural Resources - South Carolina Bat Conservation Plan: January 2017

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